AN EFFECTIVE MULTISENSORY MULTIMEDIA MODEL FOR ENGAGING LITERACY INSTRUCTION IN FIRST GRADE

by

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Abstract:

This action research project was undertaken to determine if a multisensory, multimodal approach to comprehensive reading instruction would be effective, as well as engaging, for students in a co-educational, public, first grade classroom. The first phase involved classroom study incorporating multimodal approaches to guided reading groups and whole group instruction and the second phase measured engagement of iPad usage during multisensory word study instruction. Multimodal approaches can be used for meaningful engagement for literacy instruction for all students. Literacy support activities were linked to Howard Gardner's theory of multiple intelligences. Forty-one first grade participants were included in this study. This research was conducted during the participants' guided reading block and Response to Intervention time. The research indicates a multisensory, multimodal, multimedia approach to comprehensive literacy instruction results in high levels of student engagement in learning with iPads, as well as increased academic reading achievement.

Introduction

The impetus for this research was my attempt to find the most effective intervention strategy for first grade students for whom reading does not come easily. I began reviewing literature with the goal of helping my students at risk. Educators are concerned about how to help children and meet state requirements for literacy instruction. After reviewing the work of Howard Gardner, I wondered if using a multiple intelligence paradigm would increase achievement for developing readers, as well as independent readers. And, could it be used for targeted literacy instruction?

In order to provide the best literacy instruction possible, teachers of young children must analyze the entire school day, especially guided reading time, the use of leveled readers, and shared reading time. A consideration of the various strategies that are being used suggests opportunities for multimodal approaches to be used for meaningful engagement, multisensory word study instruction, and for creating and expressing rich understandings of text.

Through multimodalities, children became deeply and authentically engaged in the high quality literature they were reading. One movement gaining popularity in schools is to purchase iPads for classroom instruction. Can a multimedia model, specifically use of iPads, be an engaging word study for first grade students? Will first grade students develop multilayered and proficient comprehension strategies? My mission was to find out if a multisensory multimedia approach would be effective and engaging for first grade literacy instruction.

If the child can't learn the way we teach, maybe we should teach the way they learn.
-Igancio Estrada

Review of Literature

Multisensory models can be effective in supporting developing learners for word study

Research supports the effectiveness of the use of a multisensory model to support developing learners in a first grade word study. Implementation of a multisensory approach as a whole class intervention to develop the ability to encode common spelling patterns and increase automaticity of the alphabetic principle while reading connected text has been shown to be an effective instructional strategy (Donnell, 2007). A multisensory model occurs when teachers actively engage children's learning through all of their senses. Sight, sound, touch, and taste and smell all have a role to play in the effective acquisition of new skills and concepts.

One of the primary cognitive goals of first grade is to teach children to read. Effective first grade teachers will engage their students in a comprehensive word study for phonics, spelling, and vocabulary as an integral part of their evidence-based reading instruction. The International Reading Association has published their ten best practices for evidenced based reading instruction. The third practice includes, **"**Integrating a comprehensive word study/phonics program into reading/writing instruction" (International Reading Association, 2002). Traditionally, a systematic word study is defined as a study of the sounds, letters, and meanings of words.

Insight into students' conceptual understanding of word elements helps teachers to provide targeted instruction as children learn to read and spell. Teachers need to assure that small group in-

struction is targeting instructional needs effectively (Ford & Opitz, 2010). Teachers often use some kind of sequential program to provide word study instruction for students. One program, *Words Their Way*, states that there is a significant connection between spelling achievement and students' reading achievement (Bear, Invernizzi, Templeton, & Johnston, 2004). Students need to study how words work as a crucial component of reading and writing instruction.

Targeted literacy instruction for developing learners using multisensory, multimodal approaches can be effective. "Children at-risk for learning difficulties benefit from this approach due to its multisensory nature and its ability to incorporate active participation for all children" (Brand, 2006, p.136). The children in this program used a variety of storytelling methods such as draw talk, character imagery, and chant. Follow up activities met children's developmental literacy needs and multiple intelligence areas. When at-risk or developing readers are valued for their personal strengths, in ways such as those suggested through a multiple intelligence theory, and given systematic and/or individualized instructional strategies, children can become proficient and independent readers (Adomat, 2009). A multisensory model can be effective in supporting developing learners for a first grade word study.

Multimedia models engaging first graders in word study

Educators are exploring the possibilities in which new technologies can transform the ways in which teachers teach and students learn. The iPad is one of those new technologies. Natalie B. Milman, Ph.D., from George Washington University, stated, "The observation and interview analysis showed that the students' engagement when working with the iPads was extremely high. In fact, several teachers noted that the students' enthusiasm for working with the

iPads had not waned even after months of use; their initial excitement did not wear off" (Milman, 2012).

Students in kindergarten and first grade even emailed their teachers. For instance, T6 would have students email the results of their spelling tests using the Spelling Test app to both the teacher and parents. At first managing so many emails was unwieldy; however, the technology integration specialist taught teachers how to manage email better by creating special filters to filter any incoming email from students (Carlson-Bancroft, Boogart, & Milman, 2012). A multimedia model, such as the use of the iPad in the classroom, can create an engaging word study for first grade students.

Benefits for students using a literature-based, multiple intelligences approach

Multimodal instructional strategies benefit developing learners as well as those in need of a more challenging curriculum. Howard Gardner's theory of multiple intelligences proposes eight ways of knowing about the world-eight intelligences, as stated in Carlisle (2001). These include, logical-mathematical, visual-spatial, bodily kinesthetic, musical rhythmic, interpersonal, intrapersonal, verbal linguistic, and naturalist. According to Gardner, (1983) as stated in Brand (2006), a blending of the eight areas must be present for significant learning to occur. Restricting educational programs to focus primarily on linguistic intelligences minimizes the importance of other forms of knowledge (Campbell, Campbell & Dickinson, 1996). Using children's multiple intelligence areas can challenge children in all areas of learning (Carlisle, 2001).

Effective literacy instruction for developing learners can be enhanced by focusing on students'

multiple intelligence areas. Assessing children's' intelligence areas and designing activities that support each intelligence facilitates effective instruction (Carlisle, 2001). Susan Trostle Brand (2006) designed effective literacy instruction for at-risk learners that supported activities for children's intelligence areas. Two seemingly contrasting approaches, the theory of multiple intelligences and systematic phonics, were combined in a complimentary way for targeted literacy instruction for developing readers.

Brand, (2006), designed and researched a program integrating the eight areas of intelligence of Howard Gardner, with systematic and structured, yet creative literacy activities. This program benefitted diverse learners by including a wide array of multiple intelligences (Brand, 2006). By embedding skill-building lessons within the context of literature and storytelling exercises based upon the eight multiple intelligence areas of Gardner at-risk learners,' literacy skills increased. Using a multi-sensory, literature-based, yet systematic phonics program, children who are at-risk for later reading delays made significant progress (Brand, 2006).

Children can make significant progress when they are given the opportunity to make emotional connections with text. When a systematic approach is combined with a meaning-based, multiple intelligence approach, children are given opportunities to make emotional connections with the texts. These connections lead to increased attention span, memory, and comprehension according to Armstrong (2003) and Brand & Donate (2001a), as stated in Brand, (2006). Clay (1991) reinforced the idea of connecting one type of learning with another, stating that "meaning is the most important source of information" as, reported in Brand, (2006). As suggested in Adomot (2009), and Kress (1997), different ways of making meaning involve different kinds of bodily

engagement. Independent work needs to be intentionally planned around meaningful diverse literacy activities (Ford & Opitz, 2010). Significant meaningful learning for our students is the goal of elementary educators, but especially with developing learners. Students benefit from literacy instruction catering to multiple intelligences.

A multiple intelligences, literature-based approach will be effective for early intervention

Early intervention programs are crucial in supporting children at risk (Mertzman & Short, 2009). The research also indicates, as the size of the small intervention group decreases, the likelihood of acceleration of learning increases (Allington, 2012). Teachers look to "early intervention programs that aim to support children in their literacy acquisition before these students fall far behind their peers" (Mertzman & Short, 2009). Effective, evidence based interventions must be utilized.

The most successful early intervention was developed in the 1970s, by Marie Clay, according to Lyons & Beaver (2007), as stated in Mertzman & Short (2009). Reading Recovery (RR) is primarily a one-on-one tutoring intervention implemented by skilled teachers. "RR results are the strongest and most researched of any intervention program to date" (Mertzman & Short, 2009). Although Reading Recovery has great successes, one of its shortfalls, is the significant overall cost. Teachers must find ways for effective early intervention that can also meet the tight budget restraints; successful early intervention can be costly.

Ford & Opitz (2010) remind us that the teacher is the most important ingredient of any effective reading program, according to the National Research Panel's findings. The key to many early

intervention programs designed for children at risk seem to be the knowledge base of the teachers and their ability to make sound decisions. Teachers are the most important resource in achieving the goal of all first graders learning to read according to Early Intervention in Reading, EIR, a program designed by Barbara Taylor at the University of Minnesota (Mertzman & Short, 2009). Research indicates that as the expertise of the teacher increases, so does the likelihood that the intervention will accelerate reading development (Allington, 2012).

Teachers are the most important resource in providing effective early intervention programs. Developing learners can benefit from expanding beyond the typical narrow focus of skill and drill phonics to include a more holistic literacy program. A holistic, multiple intelligence-based, program utilizing quality children's literature, including related songs and creative activities as a meaningful context for the acquisition and practice of literacy skills can be used for an effective literacy intervention program (Brand, 2006).

Teachers can not only utilize a multiple intelligence approach for literacy intervention blocks, but also throughout the school day. Experienced teachers have an understanding that interventions should expand on quality classroom lessons. Struggling readers need good instruction all day long (Allington, 2012). A multiple intelligence approach can be effective for early intervention as well as the remainder of the day during large group times.

The effect of the multiple intelligences approach to differentiation on large group times

When considering differentiated instruction for children who are in need of early intervention, it is not only necessary to focus on small group interventions, but also large group times through-

out the day. Teachers need more effectively designed whole group lessons. Large group lessons only benefit learners if they stay engaged the entire time (Ford & Opitz, 2010). It is important to consider maximizing the effectiveness of our entire school day, not just one small group intervention time. If instruction matters, it matters throughout the school day (Ford & Opitz, 2010). Teachers are able to provide continuous interventions throughout the day, and the result is more effective than one 30-minute tutoring session that does not connect to the remainder of the day. When planning differentiated instruction for children who are in need of early intervention, large group times must also be considered.

Another multiple intelligences approach that has been researched is the effectiveness of an interdisciplinary program combining physical education and language activities. The integration of language to a movement program encourages linguistic concepts while also addressing the movement needs of young children (Connor-Kuntz & Dummer, 1996). An integrated movement program seems to have more of an effect on the development of and the retention of children's oral and written vocabulary and speech. Movement and language are two natural and powerful ways of communication, that develop within young children in similar ways (Derri et al., 2010). Integrating movement and language helps children develop language and motor skills in holistic ways.

Finding ways to provide differentiated literacy instruction throughout the day, while utilizing Howard Gardner's research on multiple intelligences, has the capacity to create holistic instruction that developing learners can benefit from as young children. One intriguing alternative is the educational practices of Waldorf education. Waldorf education is a holistic

approach to education, based on the philosophy of Rudolph Steiner. Students in a Steiner school are utilizing multiple intelligences throughout their educational days in all subject areas. Arts are an essential component of the curriculum, and the goals include developing the full capacity of each child (Oberman, 2008). Waldorf curriculum is designed to encompass meaningful engagement, establish creativity, and further academic pursuits. A multiple intelligences approach to differentiation also positively impacts large group times.

The use of multimodal approaches for differentiation of learning, meaningful engagement, improving language, and comprehension

Finding ways for teachers to engage students is crucial. Researchers have found that the multiple intelligence theory supports drama as an early literacy intervention strategy. Students are often eager to create and tell stories that incorporate academic content (Campbell et al., 1996). Wilhelm (2007, as cited in Adomat, 2009), found, through drama, students can approach texts in imaginative ways, and create meaning in stories. Drama provides children with the types of prolonged engagements with texts often denied to young, struggling readers (Adomat, 2009). Drama involves multimodal approaches which are engaging and lead to differentiated instruction.

As mentioned above, one philosophy of education that places a heavy emphasis on multimodal approaches is Waldorf or Steiner education. A multiple intelligence paradigm is infused throughout Waldorf schools. The Waldorf focus is developmental. “In the early years, the focus is on instilling joy, self-confidence, and interdisciplinary activities (Oberman, 2008)”. Math, reading, and writing are all taught without textbooks. Teachers are trained to include activities

such as moving, drawing, and jumping rhythmically. Mathematics is taught with story, concrete experiences, naturalistic materials, and movement (Oberman, 2008). The Waldorf schools engage their students in multimodal instruction as a core part of the curriculum.

As stated in Derri et al., (2010), it seems as if this interdisciplinary approach makes abstract concepts come to life by giving young children concrete applications (Connor-Kunz and Dummer, 1996). Adomat, primarily focusing on engaging students through drama, undertook another interdisciplinary approach focusing on creating authentic comprehension activities. This approach built complex and multi-layered comprehension and deep engagement.

A multimodal approach includes speech, writing, image, gesture, drama, music, and movement to provide struggling readers with ways to create and express rich understandings of text not usually emphasized in literacy instruction (Adomat, 2009). Children are able to extend their understandings beyond a literal interpretation, as they interpret the text within the context of their own world when encouraged to use dramatic interpretation of text (Wolf, 2004 as stated in Adomat, 2009) Students can use their strengths to create multilayered and rich understandings of stories by building literary understandings through drama.

Movement activities integrated with programs designed to develop language capacities of young children have been found to be effective not only in increased engagement, but also improved language development. Movement activities motivate children and capture their attention (Derri et al., 2010). Active learning also helps children who struggle academically improve their knowledge (Derri et al, 2010; Rausechenbach, 1996; Schnirring, 1999; Werner, 1996). Motion

encourages children and increases their interest in learning. Most children have an innate desire to move, run, and play. This idea contradicts the traditional notion that the best classrooms are those where children are sitting quietly in their desks. Multimodal approaches such as those integrating movement, language, drama, and the arts can be used for meaningful engagement, improving language, and comprehension.

Methodology:

Participants:

My participants were two subsequent first grade classes from a public elementary school in a small Midwestern town. Seventeen participants (10 girls and 7 boys) were in the original study. Twenty-four children (13 girls and 11boys) participated in the follow up research. They were either 6 or 7 years old at the time of the research. The classes included 5 children from diverse backgrounds and four children with special educational needs.

Materials

- Small group literature from our district ***LEAD 21*** reading series
- Time on Task recording sheets
- District spelling lists
- Multiple Intelligence Survey
- Teacher observations
- District assessment data
- Oral Reading Fluency Assessment
- Individual fluency, reading levels, and comprehension data
- Individual work samples

Setting

All curricular activities and testing took place in my first grade classroom.

Procedures:

This case study consisted of two phases. The first phase involved classroom study incorporating multimodal approaches to guided reading groups and whole group instruction and the second phase measured engagement of iPad usage during multisensory word study instruction.

Procedure: Multiple intelligences inventory

After spending some time researching and searching for multiple intelligence inventories, I found none suitable for the primary grades. So, in order to ascertain my first graders' multiple intelligence areas, I prepared five activities for them to choose from surrounding the idea of catching leprechauns. The options were presented to them. Then, I sat back and observed who chose which activities, who worked together, who they talked to, and how engaged they were with the project they had chosen.

Options presented to first graders:

If You Like... **ART- 9 participants chose this option.**

- Draw a map about how to catch or trap a leprechaun
- Draw a poster
- Draw an ad: Missing leprechauns
- Design hiding places for leprechauns

If You Like... **WORDS - 0 participants chose this option.**

- Write a story about how to catch or trap a leprechaun

- Make a booklet
- Write a letter to the leprechauns, “Watch out leprechauns!”

If You Like... **MUSIC / RHYTHM - 0 participants chose this option.**

- Create a song about leprechauns
- Make up a rap about how to catch or trap a leprechaun

If You Like... **TO MOVE – 4 participants chose this option.**

- Make up a dance
- Create a scavenger hunt about catching leprechauns
- Invent a game to trap leprechauns
- Create a skit/play and act out the play about catching leprechauns

If You Like... **MATH AND SCIENCE - 3 participants chose this option.**

- Design an experiment about how to catch or trap a leprechaun
- Make up a game for catching leprechauns
- Make a graph, “Ways to Trap Leprechauns!”

Procedure: Guided reading groups

I also conducted book clubs based on students' multiple intelligences instead of using leveled reading groups. One of the research studies advised caution against strict adherence to leveled book clubs (Ford & Opitz (2010).

Interestingly, the options that the participants chose were not the same groups that I had put them in for book clubs. I used their choices, observations, and interest areas to create my small groups, which will be defined later in this paper. While the primary focus of each group was the one multiple intelligence area listed below, more than one intelligence area was utilized for optimal learning and engagement.

Our story was *Frog and Toad All Year* by Arnold Lobel, from our basal series. Our focus was comprehension strategies, specifically recognizing story elements.

Group 1: Bodily Kinesthetic: 6 students. We incorporated role plays, puppets, and retellings for comprehension. This group was very busy, not surprisingly! Students played with their hands, sung, and hummed much of the time. One student had trouble controlling his body, and was under the table.

When learning about story elements, the students made posters representing the different parts of the story. Then, we placed the components of the story, such as problem, solutions, setting, and characters on the floor and sequenced them in order for the students to walk on to integrate their "intelligences."

Group 2: Logical Mathematical: 5 students

We incorporated timelines, Venn diagrams, and puppets for comprehension. This group was interesting; not very emotional, but very analytical. They seemed unengaged, but had great conversations. For example, one student analyzed a character in *Frog and Toad* by saying, "He is nice, because he let Frog stay inside the house when it was wet outside."

When attempting to read the word *caught* one student said, "I know "gh" is silent." Another said, "It's not cold." No one used picture cues or guesses. It was all very logical and analytical.

Also three out of five students made lines on their papers when filling in blank charts. They were also motivated to write more after counting the number of words in their sentences.

We created a Venn diagram comparing the characters, Frog and Toad. The Venn diagram seemed to come easiest for this group. Answers and ideas about how to fill it in came quickly.

Group 3: Visual / Spatial: 6 students: We incorporated story maps, drawings, and visualization of mental images for comprehension.

It was fascinating to mix up the book clubs and see the confidence, self-esteem, and engagement instantly peak for some students who normally didn't show these traits. One student who typically slouches in her seat and does not seem to pay attention was raising her hand, contributing, reading intently, and making wonderful connections.

I also realized my "above grade-level" students who have wonderful fluency and word recognition did not have the greatest vocabulary or critical thinking. For example, one "above grade level "student while reading the vocabulary word, *meadow*, said, "What is a meadow?" Another

"developing" student said, "like in Bambi, the fawn was in the meadow when its mother got hurt."

While filling out a chart comparing the fiction sample *Frog and Toad All Year* by Arnold Lobel to the nonfiction selection *Frogs in Trees* students were discussing whether or not frogs could talk in both stories. In another example of critical thinking and engagement, one "struggling" reader said, "Frogs can talk-we just can't understand them because they croak. But they can understand each other."

My developing readers shone!! They made connections, they drew conclusions, they inferred, they demonstrated comprehension and participated far above the others! I was so proud of them and sad that I hadn't done this earlier in the year.

Procedure: Incorporating multimodal approaches into whole group instruction

Each week, during my large group mini-lessons and the small group book clubs, I used literature-based activities that use my core district mandated curriculum, but also integrated creative, meaningful emergent literacy activities. I chose lessons that not only met the goals of my research, but also the requirements of my school district's core curriculum.

For example, during one week the story *Little Bear*, a story of neighbors and friendship, was in our basal reading series. While reading aloud the story, I had the children create mental images and draw the setting of the story to utilize the visual-spatial intelligences.

We also performed skits on ways to be good neighbors to engage the kinesthetic learners. Our basal suggested that Little Bear was a good neighbor in the story. Students were to make up skits

that showed how to be a good neighbor. This activity was one that I probably would have skipped before this research study.

Another example of incorporating multimodal approaches was during our grammar lessons. Our grammar skill for that week was alphabetizing. I had cards for my students. Each card had a word on it. One group had words written in blue. Those cards said, moon, sun, stars, and planets. Another group was water categories, such as lake, river, and sea,. I made the categories into logical groups for my logical-mathematical students, and color-coded them for my visual-spatial children. The card were distributed, one per child. The students had to find other students with cards that fell into similar categories and alphabetize their cards . The kinesthetic learners stood to sequence themselves into alphabetical order.

One week we were focused on sequencing. I made three signs utilizing color for my visual learners. Green for the beginning of the story, yellow for the middle and red for the end of the story. We then stood and put the signs in order. After reading that story, and during the week while reading other stories, we referred back to those signs and continued our work on sequencing. After reading *The Busy Buzzy Bee*, we illustrated a sequencing chart demonstrating understanding of beginning, middle, and end of the story.

Multiple Intelligences and the Content Areas

I planned literature-based activities utilizing Howard Gardner's theory of multiple intelligences in content areas such as science. For example, during our study of Plants, not only did we plant seeds, we learned about the needs of plants and the plant parts while incorporating things like chants and songs. We didn't just sing them once and put them in our fluency folders either. We

read it, we sang it, we acted out the parts of the plants, repeated that song over and over and over again. We sang songs, put on plays, performed skits, used puppets, chanted, laughed, and ultimately increased motivation, emotional connections, and engagement.

During a biography study, student not only wrote reports, but also presented their information in multimodal ways. Some children wrote songs, others created puppets, some designed posters, and another option was a timeline. It was fascinating to see how engaged children can be when given choices in regards to their learning. Attention to the multiple intelligences offers increased opportunities to diversify learning strategies and appeal to the learning styles of all students.

Procedure: Multisensory word study instruction and spelling with the iPad

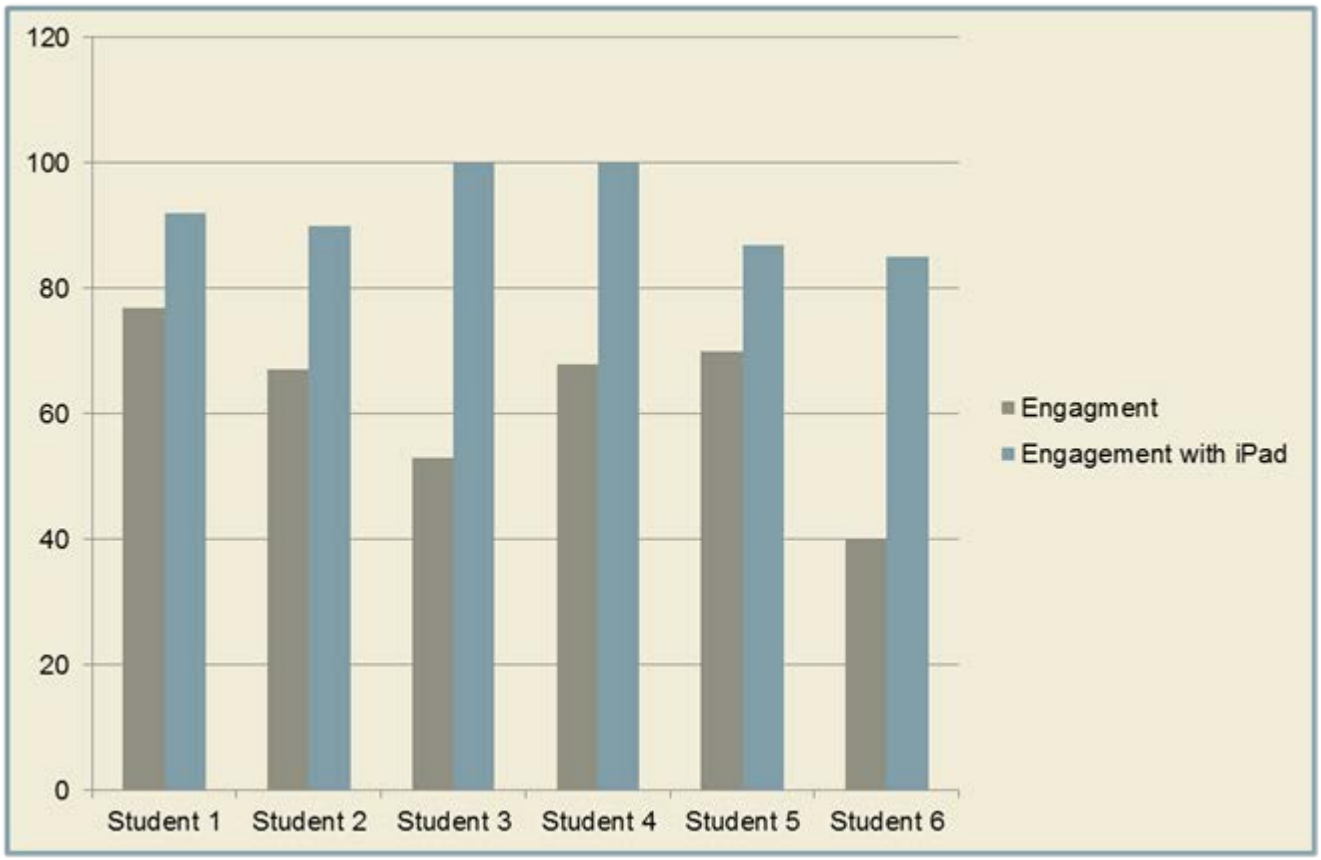
During our Response to Intervention time, all students in this group worked on our district spelling words, along with other literacy lessons. We practiced our spelling words every day as listed in the chart below. One student was scheduled to work with the iPad each day. The following chart lists the procedure days, focus, materials, and iPad App used in the class-room.

Day	Focus	Materials	iPad
Mondays	Visual/Spatial	White boards rainbow writing	Whiteboard App
Tuesdays	Auditory	sing/ chant Sound Boxes tap rhythm sticks	Spelling City Web-site "Say It" Screen Chomp Voice Record
Wednesdays	Logical/Mathematical	Word Sort paper	Spelling City Web-site "Hangmouse"
Thursdays	Kinesthetic/Tactile	Wikki stix Push-ups/exercises sign language sand trays	Tabata App
Fridays	Pretest for following week to determine targeted instruction	paper pencil	

Findings/ Results

Engagement iPad Results

The interactive touch screen of the iPad fosters interest and encourages students to master skills and strategies that have been previously introduced in class. The following chart demonstrates students being more engaged in the assigned task with an iPad than without the iPad. Student 1 was engaged in the task 77% of the time without the iPad, and 92% of the time with the iPad. Student 2 was engaged in the task 67% of the time without the iPad, and 90% of the time with the iPad. Student 3 was engaged in the task 53% of the time without the iPad, and 100% of the time with the iPad. Student 4 was engaged in the task 68% of the time without the iPad, and 100% of the time with the iPad. Student 5 was engaged in the task 70% of the time without the iPad, and 87% of the time with the iPad. Student 6 was engaged in the task 40% of the time without the iPad, and 85% of the time with the iPad. The average engagement was 62.5% engagement without an iPad and 92.3% engagement with the iPad.



Students	Engagement	with iPad
S1	77	92
S2	67	90
S3	53	100
S4	68	100
S5	70	87
S6	40	85

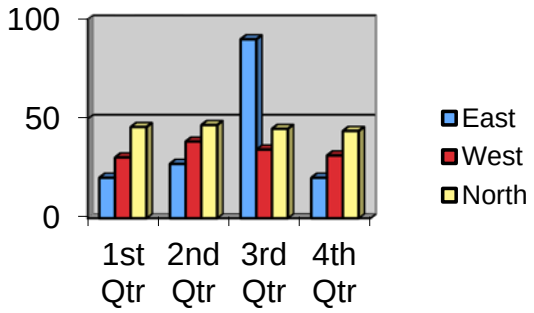
Guided Reading Level Results: Participants in this research have all grown in their guided reading levels as shown by the chart below:

Amount of Change in Guided Reading Levels during the time of this research.

	1st Gr Rdg Levels													
Student	A	B	***C***	***D***	***E***	***F***	***G***	***H***	***I***	J	K	L	M	N
1					X			X						
2					X					X				
3												X		X
4					X	X								
5					X		X							
6							X	X						
7										X			X	
8												X		X
9							X	X						
10											X	X		
11								X			X			
12							X			X				
13											X		X	
14								X		X				
15								X		X				
16													X	X
17										X			X	

Comprehension Results

What I am most impressed by is the increased comprehension within their levels, the connections students made, and the level of engagement throughout the research. The graph below shows children's reading comprehension in relationship to the reading level goals at set by our school district. that 11.8% of participants were developing toward grade level, 23.5% were at grade level, and 64.7% of my students are above grade level at the completion of this research.



Fluency Results

Fluency was not one of my initial goals for this research. But to my surprise, my class had the highest fluency scores out of the three first grade sections at my building. I believe that by focusing on the areas of multiple intelligences, we inadvertently increased the frequency that we rehearsed and performed all of our songs, skits, plays, and chants. This repetition resulted in increased fluency.

70 % of my first graders have met or surpassed their first grade fluency goals of 61 words per minute.

April Fluency WPM			
<34	35-60	61-80 *	81<
21	39	61	84
23	44	65	85
25		68	94

		68	105
		70	111
			107
			107
		*First grade goal	

Reflections and Implications:

I began with the idea of looking for a one size fits all; perfect little quick fix for early intervention during small group instruction. But after some research on effective instruction and struggling readers, I realized that the entire school day needed to be addressed. Struggling readers need effective literacy instruction throughout the day, connections made throughout the day, engagement throughout the day, interventions throughout the day, differentiated curriculum throughout the day, and multimodal approaches toward learning throughout the day for the whole class.

I have realized that this has become much more than just an intervention for me, but more of a philosophy for my classroom. Future implications of this research will be found in my classroom, not only within my literacy block, but also my large group time, and intervention block. Students are valued for their personal strengths, given individualized instructional strategies, allowed choices throughout their day and become proficient and independent readers!

A multiple intelligence paradigm can be used to plan differentiated literacy instruction. Information regarding students' intelligence areas can be used for literacy instruction. Multimodal approaches can be used for meaningful engagement for all students. Multimodal approaches can be used for meaningful engagement, multisensory word study instruction, and for creating and ex-

pressing rich understandings of text for first grade students. The research shows that a multisensory, multimodal, multimedia approach to comprehensive literacy instruction can be engaging and effective for developing readers as well as high achieving students.

Education is the most powerful weapon which you can use to change the world.
-Nelson Mandela

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